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09/592,472	06/09/2000	Herschel Clement Burstyn	SAR 13774	7435

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EXAMINER	
HOFFMAN, BRANDON S	

ART UNIT	PAPER NUMBER
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DATE MAILED: 12/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/592,472	BURSTYN ET AL.	
	Examiner	Art Unit	
	Brandon Hoffman	2171	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-20 is/are rejected.

7)☒ Claim(s) 6-20 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 09 June 2000 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-5 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Drawings

1. New corrected drawings are required in this application because the reference numbers are hard to read. Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

The drawings are objected to because they fail to include a legend for the block elements. A reader of the application would not be able to tell the general view of the system without referring to the specification. Also, figure 5-8 contain blocks that a very hard to read because they are shaded black. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 6-20 are objected to because of the following informalities:

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims

are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claim 20 shall be renumbered 6.

Misnumbered claim 6 shall be renumbered 7.

Misnumbered claim 7 shall be renumbered 8.

Misnumbered claim 8 shall be renumbered 9.

Misnumbered claim 9 shall be renumbered 10.

Misnumbered claim 10 shall be renumbered 11.

Misnumbered claim 11 shall be renumbered 12.

Misnumbered claim 12 shall be renumbered 13.

Misnumbered claim 13 shall be renumbered 14.

Misnumbered claim 14 shall be renumbered 15.

Misnumbered claim 15 shall be renumbered 18.

Misnumbered claim 17 shall be renumbered 19.

Misnumbered claim 18 shall be renumbered 20.

Misnumbered claim 19 shall be renumbered 17.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-5, 11, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Epstein et al. (U.S. Patent No. 6,529,600).

Regarding claim 1, Epstein et al. teaches a method for distorting a recording of projected images, the recording having a frame frequency, the method comprising the steps of:

- Imposing an interference on the projected images at a frequency that renders the interference imperceptible to a human viewer (col. 4, lines 23-27),
    - Wherein a difference between the interference frequency and the recording frame frequency is perceptible to a human (col. 2, lines 13-29).

Regarding claim 2, Epstein et al. teaches wherein the step of imposing an interference includes the step of interrupting a projection of the projected images (col. 3, lines 38-45).

Regarding claim 3, Epstein et al. teaches wherein the interference is characterized by a plurality of parameters, comprising the further step of varying at least one of the parameters (col. 4, lines 12-15).

Regarding claim 4, Epstein et al. teaches wherein the step of varying at least one of the parameters includes the step of dynamically varying at least one of the parameters (col. 3, lines 65-67).

Regarding claim 5, Epstein et al. teaches wherein the at least one of the parameters is selected from the group comprising duty cycle, frequency, amplitude, presentation order and wavelength (col. 3, lines 40-42).

Regarding claim 11, Epstein et al. teaches a projection system for distorting a recording of projected images, the recording having a frame frequency, the system comprising:

- An interfering element (col. 3, lines 38-45); and
- A controller coupled to the interfering element (fig. 2, ref. num 16),
    - Wherein the controller causes the interfering element to impose a humanly imperceptible alteration on the projected images (col. 4, lines 23-27) and
    - Wherein a playback of a recording of the projected images displays humanly perceptible alterations (col. 2, lines 13-29).

Regarding claim 12, Epstein et al. teaches wherein the interfering element includes one selected from the group comprising a shutter, a filter, a light valve and a lens (the Examiner believes it to be inherent that the projection apparatus contains a shutter).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Epstein et al. (U.S. Patent No. 6,529,600) in view of Wrobleski (U.S. Patent No. 6,018,374).

Regarding claims 9 and 15, Epstein et al. teaches all of the limitations of claims 1 and 11, respectively, above. However, Epstein et al. does not teach wherein the interfering element includes a light source operable to project an image.

Wrobleski teaches wherein the interfering element includes a light source operable to project an image (fig. 1, ref. num 14).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine an interfering element that includes a light source, as taught by Wrobleski, to the method/system of Epstein et al. It would have been obvious to one of ordinary skill in the art to combine an interfering element that includes a light source, as taught by Wrobleski, to the method/system of Epstein et al. because the light

source interferes with the recording device, but not with the viewing audience, thus hindering copying of the video image.

This combined method would contain the features of the projector, from Epstein et al., and a separate projecting device, i.e. an infrared projector – like the one from Wrobleski. These two projecting devices would project an image on the screen, for the legitimate viewers, and a second image that would distort any recordings made by a recording device.

Claims 6-8, 10, 13, 14, 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Epstein et al. (U.S. Patent No. 6,529,600) in view of Sato (U.S. Patent No. 6,041,158).

Regarding claim 6, Epstein et al. teaches all of the limitations of claim 1, above. However, Epstein et al. does not teach separating the projected images into a plurality of colors, wherein the imposing step includes the further step of modulating at least one of the plurality of colors.

Sato teaches separating the projected images into a plurality of colors (col. 6, lines 5-8), wherein the imposing step includes the further step of modulating at least one of the plurality of colors (fig. 4, ref. num 4).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine separating the projected images into a plurality of colors, wherein at least one color is modulated, as taught by Sato, to the method of Epstein et al. It would have been obvious to combine separating the projected images into a plurality of colors, wherein at least one color is modulated, as taught by Sato, to the method of Epstein et al. because the separation of the image into its distinct colors allows modulation to be performed on any of the colors to prevent successful reproduction of copied images.

This method, as prepared by Epstein et al. in view of Sato, would take a projected film image and separate the color components into the respective colors. Then, after modulating any combination of the colors, the 'new' image is projected for view by a legitimate audience.

Regarding claim 7, the combination of Epstein et al./Sato teaches wherein the step of modulating the at least one color includes changing a time relationship of the at least one color with respect to at least one other of the plurality of colors (see col. 5, lines 8-18 of Sato).

Regarding claim 8, the combination of Epstein et al./Sato teaches wherein the step of modulating the at least one color includes blanking the at least one color for an interval (see col. 8, lines 41-45 of Sato).

Regarding claim 20, Epstein et al. teaches all the limitations of claims 1 and 3, above. However, Epstein et al. does not teach wherein the imposing step includes the steps of scanning a white light strip; separating the white light strip into color light strips; separating spatial entities into component colors; and modulating the component colors of the spatial entities over a color light strip.

Sato teaches wherein the imposing step includes the steps of:

- Scanning a white light strip (col. 5, line 54 through col. 6, line 4 teaches that the original image is read by the reproducing device, here in this case, the original image is the white light strip);
- Separating the white light strip into color light strips (col. 6, lines 5-8);
- Separating spatial entities into component colors (col. 6, lines 5-8); and
- Modulating the component colors of the spatial entities over a color light strip (col. 6, lines 42-55).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine scanning a white light strip, separating the white light strip into color light strips, separating the spatial entities into component colors, and modulating the component colors over a color light strip, as taught by Sato, to the method of Epstein et al. It would have been obvious to combine scanning a white light strip, separating the white light strip into color lights strips, separating the spatial entities into component colors, and modulating the component colors over a color light strip, as

taught by Sato, to the method of Epstein et al. because separation of the image into its distinct colors allows modulation to be performed on any of the colors to prevent successful reproduction of copied images.

This method, as prepared by Epstein et al. in view of Sato, would take a projected white image and separate the color components into their respective colors. Then after modulating any combination of the colors, the 'new' image is projected for view by a legitimate audience.

Regarding claim 10, Epstein et al. teaches a method for operating a motion picture projector, comprising the steps of:

- Determining a recording device frame frequency (col. 3, lines 20-32)
- Blanking a projected image at a humanly imperceptible blanking frequency (col. 4, lines 23-27),
    - Wherein a difference between the frame frequency and the blanking frequency is a humanly perceptible frame frequency (col. 2, lines 13-29).

Epstein et al. does not teach blanking a projected image, but instead teaches varying the frame rate for the projected image.

Sato teaches:

- Blanking a projected image at a humanly imperceptible blanking frequency (col. 8, lines 41-45).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine blanking the projected image, as taught by Sato, to the method of Epstein et al. It would have been obvious to one of ordinary skill in the art to combine blanking the projected image, as taught by Sato, to the method of Epstein et al. because blanking a small amount of frames during a reproduction of a film image would distort the image enough to hinder recording, but allow an audience to view to projected image.

This method takes a determined frame frequency and blanks certain frames of the image to distort the picture enough for a recorder, but not for a legitimate viewing audience.

Regarding claim 13, Epstein et al. teaches all the limitations of claim 11, above. However, Epstein et al. does not teach wherein the controller is further operable to cause the interfering element to vary a plurality of parameters, the interfering element including a separator responsive to image data and operable to separate the image data into a plurality of colors; and a color modulator responsive to the controller and operable to adjust at least one of the plurality of parameters for at least one of the colors; the system further comprising a combiner coupled to the interfering element and operable to combine the image data for projection.

Sato teaches wherein the controller is further operable to cause the interfering element to vary a plurality of parameters, the interfering element including:

- A separator responsive to image data and operable to separate the image data into a plurality of colors (col. 6, lines 5-8); and
- A color modulator responsive to the controller and operable to adjust at least one of the plurality of parameters for at least one of the colors (col. 6, lines 42-55);
- The system further comprising a combiner coupled to the interfering element and operable to combine the image data for projection (col. 7, lines 16-21).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine separating an image into a plurality of colors and modulating the colors, wherein the system comprises a combiner for combing the image data, as taught by Sato, to the system of Epstein et al. It would have been obvious to combine separating an image into a plurality of colors and modulating the colors, wherein the system comprises a combiner for combing the image data, as taught by Sato, to the system of Epstein et al. because separation of the image into its distinct colors allows modulation to be performed on any of the colors to prevent successful reproduction of copied images. The combing step puts the separate colors back into one image.

This system, as prepared by Epstein et al. in view of Sato, would take a projected film image and separate the color components into the respective colors. Then after modulating any combination of the colors, the 'newly modulated' colors are combined back into one image and projected for view by a legitimate audience.

Regarding claim 14, the combination of Epstein et al./Sato teaches wherein the at least one of the parameters includes one parameter selected from the group comprising duty cycle, frequency, amplitude, brightness, intensity, presentation order and wavelength (see col. 6, lines 49-60 of Sato).

Regarding claim 16, the combination of Epstein et al./Sato teaches wherein the interfering element further includes:

- A light source operable to provide a light strip (see col. 3, lines 24-27 of Epstein et al., shows a typical projector has a light source);
- A color separator operable to separate the light strip into colors light strips (see fig. 1, ref. num 1 of Sato); and
- A scanner for scanning the color light strips over a frame (the Examiner believes it to be inherent that the light strips are scanned over a frame. In a projection system the images are fed through a scanner, wherein the scanner displays the light pattern on a screen),
    - Wherein the color modulator varies the parameters over the color light strips (see fig. 5A-D of Sato, this shows the different modulation levels provided on the color light strips).

Regarding claim 19, the combination of Epstein et al./Sato teaches wherein the modulator varies a projection rate of the color light strips over the frame (see col. 3, lines 65-67 of Epstein et al.).

Regarding claim 17, Epstein et al. teaches:

- Â white light source for providing white light (col. 3, lines 24-27, shows a typical projector has a light source).

Epstein et al. does not teach a detector for determining spatial entities for color modulation, the interfering element including: a color separator for color separating the white light and the spatial entities for color modulation into component colors; a time multiplexer for varying parameters of the component colors of the spatial entities for color modulation; a processor for defining an order of coarse bits and of fine bits for at least one of the component colors of the spatial entities for color modulation; a modulator for modulating the white light component colors and the component colors of the spatial entities for color modulation, the modulator providing modulated component colors; and a combiner for combining the modulated component colors.

Sato teaches:

- A detector for determining spatial entities for color modulation (col. 4, lines 18-29 shows the way spatial entities are detected, based on the horizontal sync, followed by a burst signal),
- The interfering element including:
    - A color separator for color separating the white light and the spatial entities for color modulation into component colors (fig. 4, ref. num 1);

- A time multiplexer for varying parameters of the component colors of the spatial entities for color modulation (col. 6, lines 25-30);
- A processor for defining an order of coarse bits and of fine bits for at least one of the component colors of the spatial entities for color modulation (fig. 3B, ref. num b' and c', and col. 5, lines 23-33);
- A modulator for modulating the white light component colors and the component colors of the spatial entities for color modulation (fig. 4, ref. num 3),
  - The modulator providing modulated component colors (fig. 4, ref. num 4); and
- A combiner for combining the modulated component colors (col. 7, lines 16-21).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine a detector for determining spatial entities, the interfering element including: a color separator; a time multiplexer; a processor for defining an order of coarse bits and of fine bits; a modulator for modulating the white light component colors; and a combiner for combining the modulated component colors, as taught by Sato, to the system of Epstein et al. It would have been obvious to combine a detector for determining spatial entities, the interfering element including: a color separator; a time multiplexer; a processor for defining an order of coarse bits and of fine bits; a modulator for modulating the white light component colors; and a

combiner for combining the modulated component colors, as taught by Sato, to the system of Epstein et al. because the separator, multiplexer, processor, and modulator perform the steps necessary to copy protect an image from a video recorder while allowing legitimate viewers to see the image. The combiner simply puts the colors back together into a complete image.

This system, as prepared by Epstein et al. in view of Sato, would take a projected film image and separate the color components into the respective colors. Next, the time multiplexer and processor provide ways to dynamically change parameters on the colors that need modulated, therefore hindering a pirate from figuring out the static parameters and setting his/her camera for that interference rate. Finally, after modulating any of the colors, the 'newly modulated' colors are combined back into one image, whereby a legitimate audience can view the image.

Regarding claim 18, the combination of Epstein et al./Sato teaches wherein the detector determines frame-linked spatial entities (see col. 4, lines 18-29 of Sato), the separator operable to separate the frame-linked spatial entities into component colors (see col. 6, lines 5-8 of Sato), and the modulator operable to modulate the component colors of the frame-linked spatial entities (see col. 6, lines 42-49 of Sato).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon Hoffman whose telephone number is 703-305-4662. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Brenda Hoffman

BH
12/12/03

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